emulsion layer and peeling at least the silver halide emulsion layer by the peeling means.

Claim 15. (Amended) The method of processing a light-sensitive material according to claim 14, wherein the silver halide emulsion layer comprises a hydrophilic colloid in an amount of 70% by weight or less based on the silver halide in terms of silver nitrate.

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claim 1 has been amended as shown above, to employ clearer language so as to overcome the rejection of this claim under 35 USC 112, second paragraph. Claim 14 has been amended as shown above to depend on claim 1. Claim 15 has accordingly been amended as shown above to better depend from claim 14. The specification has been amended as shown above to correct a typographical error. No new matter has been added.

Claims 1-12 stand rejected under 35 USC 112, second paragraph because the Examiner finds the language regarding the liquid-absorbing rate to be unclear. Claim 1 has according been amended to employ clearer language.

The applicants submit that all presently considered claims are fully allowable under Section 112, second paragraph.

The applicants respectfully traverse the rejection of claims 1-6, 9, 12 and 13 under 35 USC 102(b) in view of De Rycke. This reference does not anticipate the presently claimed invention or make it obvious.

Before addressing the prior art rejection the applicants provide the following preliminary comments that are believed to be helpful in understanding patentable features of the presently claimed invention.

One of the most important characteristic features of the present invention resides in using a specific peeling means in that (A)/(B) is 60% or more wherein (A) is a liquid absorbed amount at 0.1 second after contacting the peeling means with a liquid and (B) is a liquid absorbed amount at 0.2 second after contacting the peeling means with a liquid.

This feature is clearly supported by the working Examples of the present specification. That is, in Example 4 on page 32, line 29 to page 35, line 24 of the present specification, Peeling sheet A has a liquid absorption amount (A) at 0.1 second of 36 ml/m^2 and (B) at 0.2 second of 43 ml/m^2 as disclosed on page 34, lines 11 to 17 of the present specification. Thus, (A)/(B) of Peeling sheet A is 36/43 x 100 = 84% which is within the scope of the present invention.

In contrast, with respect to Peeling sheet B, the liquid absorption amount (A) at 0.1 second is 6 ml/m^2 and (B) at 0.2 second is 13 ml/m^2 as disclosed on page 34, lines 17 to 22 of the present specification, so that (A)/(B) = 6/13 x 100 = 46% which is out of the scope of the invention as presently claimed.

Similarly, Peeling sheet C has the liquid absorption amount (A) at 0.1 second of 4 ml/m^2 and (B) at 0.2 second of 9 ml/m^2 as mentioned on page 34, lines 22 to 26 of the present specification, so that (A)/(B) = 4/9 x 100 = 44% which is out of the scope of the invention as presently claimed.

When treatment is carried out by using these Peeling sheets A, B and C, then, a silver halide emulsion layer can be completely peeled off in Peeling sheet A, but in silver halide emulsion layers which use Peeling sheets B and C, the emulsion layer could never be peeled off as disclosed on page 34, lines 28 to 34 of the present specification.

Also, in Example 5 mentioned on page 35, line 26 to page 36, line 24 of the present specification, Peeling sheet D has a liquid absorption amount (A) at 0.1 second of 44 ml/m^2 and (B) at 0.2 second of 53 ml/m^2 as disclosed on page 36, lines 9 to 14 of the present specification. Thus, (A)/(B) of Peeling sheet D is 44/53 x 100 = 83% which is within the scope of the invention as presently claimed.

Similarly, in Peeling sheet E, the liquid absorption amount (A) at 0.1 second is 19 ml/m^2 and (B) at 0.2 second is 27 ml/m^2 as disclosed on page 36, lines 14 to 19 of the present specification, so that (A)/(B) = 19/27 x 100 = 70% which is within the scope of the invention as presently claimed.

When treatment is carried out by using these Peeling sheets D and E, then, peeling characteristics of the emulsion layer and printing characteristics of these Peeling sheets D and E are good as in that of Peeling sheet A as disclosed on page 36, lines 21 to 24 of the present specification.

Moreover, in Example 6 mentioned on page 36, line 26 to page 37, line 10 of the present specification, Peeling sheet F has a liquid absorption amount (A) at 0.1 second of 22 ml/m^2 and (B) at 0.2 second of 28 ml/m^2 as disclosed on page 36, lines 31 to 33 of the present specification. Thus, (A)/(B) of Peeling sheet F is 22/28 x 100 = 79% which is within the scope of the invention as presently claimed.

Similarly, in Peeling sheet G, the liquid absorption amount (A) at 0.1 second is 13 ml/m^2 and (B) at 0.2 second is 18 ml/m^2 as disclosed on page 36,

line 34 of the present specification, so that (A)/(B) = 13/18 x 100 = 72% which is within the scope of the invention, as presently claimed. Also, in Peeling sheet H, the liquid absorption amount (A) at 0.1 second is 7 ml/m^2 and (B) at 0.2 second is 11 ml/m^2 as disclosed on page 36, line 35 of the present specification, so that (A)/(B) = 7/11 x 100 = 64% which is within the scope of the invention as presently claimed.

When treatment is carried out by using these Peeling sheets F and G, then, peeling characteristics of the emulsion layer and printing characteristics of these Peeling sheets F and G are good as in that of Peeling sheet A as mentioned on page 37, lines 2 to 5 of the present specification. In Peeling sheet H, peeling was slightly bad but it became good when squeeze roller was operated as disclosed on page 37, lines 5 to 10 of the present specification.

Furthermore, in Example 7 disclosed on page 37, line 12 to page 41, line 3 of the present specification, Peeling sheet disclosed therein has a liquid absorption amount (A) at 0.1 second of 39 ml/m^2 and (B) at 0.2 second of 48 ml/m^2 as disclosed on page 39, lines 21 to 27 of the present specification. Thus, (A)/(B) of this Peeling sheet is 39/48 x 100 = 81% which is within the scope of the invention as presently claimed.

More generally, the processing method of the present invention is applied to, for example, in the field of a lithographic printing plate or a photoresist. In the lithographic printing plate using the DTR method, after forming a silver image on an aluminum support, a silver halide emulsion layer is removed. Accordingly, the silver halide emulsion layer is so designed that it can be easily removed. For example, no hardener is substantially contained in the silver halide emulsion layer. Also, in the field of a photoresist, by making difference in solubility of a light-

sensitive layer at an exposed portion and an unexposed portion, and the portion having a high solubility is removed. For example, in the case of a negative material, a region of a light-sensitive layer to which light is irradiated is cured to form an image portion, and a region of a light-sensitive layer to which no exposure to light is carried out is removed by dissolution.

As described above, the processing method of the present invention is applied to a light-sensitive material in which a light-sensitive layer which becomes finally unnecessary is to be removed. The light-sensitive layer of these light-sensitive materials are previously designed to be easily removed.

In a conventional method of removing a light-sensitive layer, it is typical to wash off the light-sensitive layer by using a large amount of washing water. However, a large amount of washing water is used, so that it is environmentally and economically disadvantageous.

On the other hand, the method has been known of using a peeling means as in the present invention. However, in the conventional peeling method, there is a problem that uniform and complete peeling cannot be carried out.

Thus, in the present invention, a peeling means (a peeling sheet) has been intensively studied to develop the invention.

The technical basis of the present invention is based on the following, as described on page 10, lines 1 to 23 of the present specification.

When a light-sensitive layer is peeled off by adhering a peeling means to the developed light-sensitive layer, it is important to make an adhesive force between the light-sensitive layer and the peeling means larger than an adhesive force between the light-sensitive layer and a support. To make the adhesive force larger between the light-sensitive layer and the peeling means, it is necessary to

absorb a developing solution maintained in the light-sensitive layer and a surface thereof rapidly with a large amount by the peeling means when both are contacted with each other. At this time, when peeling is started during the term wherein the developing solution at the lower portion (the portion close to the support) of the light-sensitive layer of said printing plate is adsorbed with not so great an amount by the peeling means (i.e., a concentration of the developing solution is higher at the under portion than that of the upper portion, so that there is a concentration gradient of the developing solution in the layer), the light-sensitive layer is removed uniformly and completely from the support.

Accordingly, the peeling means of the present invention is characterized in that a liquid absorption amount at an extremely initial stage of within 0.1 second is larger than a liquid absorption amount from 0.1 second to 0.2 second at the next step.

With respect to the cited reference of DeRycke, please be aware that in the field of the graphic art, an exposed silver halide is developed to form an image of blackened silver, whereas an unexposed silver halide is dissolved in the next fixing solution by a silver halide complexing agent (also called a silver halide solvent) such as a thiosulfate and removed from the silver halide emulsion layer.

De Rycke teaches that in place of dissolving and removing the unexposed silver halide (undeveloped silver halide) by a fixing solution as mentioned above, it is employed a method of closely contacting a silver halide emulsion layer and a receptor element.

A water-absorbing layer of the receptor element in De Rycke contains a silver halide complexing agent and a metal sulfide as a silver ion scavenger in an organic hydrophilic colloidal binder. When the water-absorbing layer is contacted

to the silver halide emulsion layer which had been developed and swelled, the silver halide complexing agent in the water-absorbing layer is diffused into the silver halide emulsion layer to form a complexed silver compound by dissolving the undeveloped silver halide. The complexed silver compound is diffused into a metal sulfide in the water-absorbing layer to form a silver sulfide precipitate. That is, only an undeveloped silver halide in the silver halide emulsion layer is diffused and transferred into the receptor element.

It is clear from the disclosure of De Rycke, particularly at column 1, lines 56 to 63 of the reference, that the teachings are directed to the graphic art field forming a final image in a silver halide emulsion layer of a light-sensitive material without being based on diffusion transfer of an image-forming substance, throughout the specification. The final image in the graphic art field is formed by exposed silver halide in the silver halide emulsion layer. Simultaneously, a fixing treatment for removing an unexposed silver halide (non-developed silver halide) from the silver halide emulsion layer is carried out. This fixing treatment is to remove non-developed silver halide and not to peel off the silver halide emulsion layer. Thus, the fixing means of De Rycke and the peeling method of the light-sensitive layer of the present invention are significantly different from each other.

Accordingly, the applicants submit that the presently claimed invention is not anticipated nor rendered obvious by the teachings of De Rycke at least because the peeling method of the present invention and the fixing method of undeveloped silver halide of De Rycke patent are significantly different techniques, and the fields of light-sensitive materials are quite different from each other.

The presently claimed invention is fully allowable under Section 103(a), as well as Section 102(b) in view of De Rycke.

The applicants respectfully traverse the rejection of claims 14 and 15 under 35 USC 102(b) in view of Coppens et al. This reference does not anticipate the presently claimed invention or make it obvious.

Coppens teaches a method of making a lithographic printing plate using a DTR method. Please note that claims 14 and 15 have been amended to directly or indirectly depend on claim and thus recite a method of processing a light-sensitive material.

Accordingly, the applicants submit that the presently claimed invention is no where disclosed, suggested or made obvious by the teachings of Coppens. The presently claimed invention is fully allowable under Section 103(a) as well as Section 102(b).

The applicants respectfully traverse the rejection of claims 7-8 under 35 USC 103(a) in view of De Rycke. This reference does not make the presently claimed invention to obvious.

The teachings of De Rycke has been discussed above and the presently claimed invention thoroughly distinguished over the teachings of this reference under both Section 102(b) and Section 103(a).

Accordingly, the applicants submit that the presently claimed invention is fully allowable under Section 103(a) in view of De Rycke.

The applicants respectfully traverse the rejection of claims 1-3, 5, 9-13 and 16 under 35 USC 103(a) in view of Coppens . This reference does not make the presently claimed invention to obvious.

Coppens teaches a method of making a lithographic printing plate using a DTR method. Coppens discloses a method of contacting a receiving means to a silver halide emulsion layer and then removing the same. However, at column 7, lines 9 to 24, particularly at line 14 of Coppens, only a polyethylene-coated paper sheet is described as a receiving means, and the peeling means of the present invention is not disclosed or suggested.

Coppens only discloses a polyethylene-coated paper sheet which has no characteristic feature as a peeling sheet. Indeed, the method of Coppens presents problems which are to be solved by the present invention.

The presently claimed invention is nowhere disclosed, suggested or made obvious by the teachings of Coppens. The presently claimed invention is fully allowable under Section 103(a) in view of the prior art.

In view of the above, it is believed that this application is in condition for allowance and a Notice to that effect is respectfully requested.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Proposed Amendments To The Specification Showing Deletions And Insertions.

Paragraph starting at page 36, line 28 of specification

In the same manner as in Example 4, peeling sheets F to H having the following liquid-absorption characteristics were prepared except for changing the coated amount of the silica layer in the peeling sheet A. In the peeling sheet F, liquid-absorption amounts (ml) 0.1 second/0.2 second after contacting with the developing solution per 1 m^2 were 22 ml/28 ml, respectively. Similarly, they were 13 ml/18 ml in the peeling sheet G, and [17 ml/11 ml] 7 ml/11 ml in the peeling sheet H, respectively.

IN THE CLAIMS:

Proposed Amendments To Claims 1, 14 and 15 Showing Deletions And Insertions.

Claim 1. (Amended) A method of processing a light-sensitive material which comprises exposing a light-sensitive material having at least one light-sensitive layer on a support, and subjecting to development by a dipping system or a coating system, and then, peeling at least the light-sensitive layer off by bringing a peeling means into close contact with said light-sensitive material, wherein said peeling means is a material having a ratio (A)/(B) of a liquid-

absorbing [rate in which a liquid-absorption amount within 0.1 second after getting the peeling means in contact with a liquid is 60% or more based on a liquid-absorption amount within 0.2 second after the same] amount (A) at 0.1 second after contacting with a liquid, to a liquid absorbing amount (B) at 0.2 second after contacting with the liquid, the ratio (A)/(B) being 60% or more.

Claim 14. (Amended) A method of processing a light-sensitive material according to claim 1 [making a lithographic printing plate] , wherein said light sensitive material is a silver halide emulsion layer, [which comprises exposing a lithographic printing plate having at least a] the silver halide emulsion layer being on [an anodized aluminum] the support, the support being of anodized aluminum , [and] said method further comprising, using a silver complex diffusion transfer process, coating a developing solution to effect development, bringing [a] the peeling means into close contact with the [lithographic printing plate] silver halide emulsion layer and peeling at least the silver halide emulsion layer by the peeling means.

Claim 15. (Amended) The method of processing a light-sensitive material according to claim 14 [making a lithographic printing plate according to Claim 14], wherein the silver halide emulsion layer comprises a hydrophilic colloid in an amount of 70% by weight or less based on the silver halide in terms of silver nitrate.